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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,574	12/31/2003	Naoki Ayai	040256-0129	8978

22428 7590 01/25/2006

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EXAMINER	
COOKE, COLLEEN P	
ART UNIT	**PAPER NUMBER**
1754	

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/749,574	AYAI, NAOKI	
	Examiner	Art Unit	
	Colleen P. Cooke	1754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 December 2005 and 13 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) *2,3,12-17,19,20,22,23,25 and 26* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-11,18,21,24 and 27* is/are rejected.

7)☒ Claim(s) *5-8* is/are objected to.

8)☒ Claim(s) *1-27* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 09/938,829.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 7/5/05, 8/22/05, 12/1/05
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Election/Restrictions

Applicant's election of species A, Claims 1, 4-11, 18, 21, 24, and 27 in the reply filed on 10/13/05 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Objections

Claims 5-8 are objected to because of the following informalities: Claims 5-8 each recite, in lines 1-2, a method "as defined in one of claims from 1," which appears to be a typographical error that ought to read "as defined in claim 1". Appropriate correction is required.

Claim 5 is additionally objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 5 currently depends from claim 1 which requires forming a precursor of oxide superconductor into a rod. Claim 5 attempts to further limit the forming of the precursor of oxide superconductor such that only a portion of the oxide superconductor composition is present. This limitation is unclear, as explained below with regards to the rejection under 112 second paragraph, and further it appears to fail to further limit the precursor of oxide superconductor as already required by claim 1 since it would appear that the limitation of claim 5, in requiring only a partial precursor composition, attempts to broaden the limitation already present and required in claim 1. In other words, since claim 1 requires the

rod to be a precursor, claim 5 is indefinite for further requiring only a portion of the precursor. For the purposes of further examination, claim 5 will be treated along with claim 1.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5, 7, and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites the limitation "said ceramic powder" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the powder" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 21 recites the limitation "the powder" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 is further indefinite as it is unclear what compositions or materials will satisfy the requirements of claim 1 as a precursor of oxide superconductor and yet will also satisfy the requirements of claim 5 by being only a part of the composition of the precursor of oxide superconductor. Claim 5 appears to attempt to broaden out the compositions which may make up the precursor rod beyond the scope of what is already required by claim 1. This indefiniteness is in relation to the objection to claim 5 above for failing to further limit claim 1; any corrections or

amendments should take both the objection and rejection into account accordingly. For the purposes of further examination, claim 5 will be treated along with claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5-6, 8, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Flukiger et al. (WO 96/28853). Please see the provided translation that is referenced herein.

Flukiger et al. teaches (see Figures 1-3): forming a precursor superconducting rod (3) in a silver-based sheath (4) on page 12, line 3-page 13, line 9 and page 14, last paragraph; forming a ceramic layer (5) over the precursor rod on page 18; inserting a plurality of these into a silver pipe (8) on page 32, line 10-16; subjecting the multifilament to plastic deformation on page 33, line 13; and subjecting the multifilament to a heat treatment to produce oxide superconductors on page 35, line 1.

Regarding claim 6, Flukiger et al. teaches that the multifilament may be twisted prior to heat treatment (page 34, lines 3-5).

Regarding claim 8, Flukiger et al. teaches bismuth-based superconductors (page 3, third paragraph).

Claims 1, 4, 5, 7, 9-11, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Dubots et al. (4954479).

Dubots et al. teaches (sole figure) forming a precursor superconducting rod (1) and a ceramic layer (2) over it which is then inserted into a copper metal pipe (5) and wherein a plurality of monofilaments may be bundled together (Column 2, lines 59-61). Dubots et al. further teaches steps of plastic deformation and heat treatment (Column 2, lines 46-48 and Column 3, lines 41-45) and that the oxide powder is formed by isostatic compacting (Column 2, lines 40-41). Dubots et al. also teaches that the ceramic layer may be made of oxides of barium, lead, silver, calcium, YBCO or mixtures thereof (Column 2, lines 25-30).

Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 01-95409.

JP 01-95409 teaches (see Figures 1, 5, and abstract) a multifilament superconductor formed by a precursor superconducting rod (2); forming a ceramic layer (3), specifically a perovskite, on the superconductor; inserting a plurality of these into a metal pipe (12), subjecting it to plastic deformation, and then heat treated (see also page 41, last full paragraph which heat treats at temperatures of 900-1000°C).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4, 11, 18, 24, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flukiger et al. (WO 96/28853) as applied to claims 1, 5-6, 8, and 10 above, and further in view of JP63239741.

Flukiger et al. teaches the method of making a multifilament superconductor as described with respect to claim 1 above. Flukiger et al. does not teach that the ceramic layer is formed by extrusion.

JP63239741 teaches that a ceramic layer is formed on a superconductor by extrusion (see abstract).

It would have been obvious to modify the method of Flukiger et al. by forming the ceramic layer by extrusion because JP63239741 teaches that forming a ceramic layer on a superconductor by extrusion is know and that such process easily produces a long-size superconductive wire being in a low magnetic field and showing stable and excellent characteristics (see abstract).

Claims 11 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 01-95409 as applied to claim 1 above, and further in view of JP63239741.

JP 01-95409 teaches the method of making a multifilament superconductor as described with respect to claim 1 above. JP 01-95409 does not teach that the ceramic layer is formed by extrusion.

JP63239741 teaches that a ceramic layer is formed on a superconductor by extrusion (see abstract).

It would have been obvious to modify the method of JP 01-95409 by forming the ceramic layer by extrusion because JP63239741 teaches that forming a ceramic layer on a superconductor by extrusion is know and that such process easily produces a long-size superconductive wire being in a low magnetic field and showing stable and excellent characteristics (see abstract).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colleen P Cooke whose telephone number is 571-272-1170. She can normally be reached Mon.-Thurs. 8am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, her supervisor, Stan Silverman can be reached at 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Colleen P. Cooke

Colleen P Cooke
Primary Examiner
Art Unit 1754